

Remarks

The Application has been reviewed in light of the Official Action mailed February 6, 2006. Claims 1 and 16 are amended. Claims 15 and 30 are cancelled. Claims 31-34 are pending in the Application.

No new matter is introduced by the amendments. Claim 1 has been amended to incorporate the limitations of dependent claim 30. New claim 31 incorporates the limitations of claim 1 and dependent claim 20. New claim 32 incorporates the limitations of claim 1 and dependent claim 25. New claim 33 incorporates the limitations of claim 1 and dependent claim 26. New claim 34 states the limitations of dependent claim 27.

The Examiner rejected claims 1-30 under 35 U.S.C. 103(a) as being unpatentable over Alfano (US 6,240,312). Applicant respectfully requests that the Examiner reconsider the rejection in light of the fact that amended claim 1 requires "a position-detecting element whose position can be determined from outside the body and which is capable to detect at least one of a position and an orientation of said probe with respect to axes of said probe relative to said body cavity;" new claim 31 requires "a capsule that "contains at least one luminescent substance which can be excited by excitation from outside the body and emits light through a capsule wall;" new claim 32 requires that the "probe has a fully enclosing transparent capsule wall;" and that new claim 33 requires that the capsule "contains at least one element emitting therapeutic light, said element emitting light for photodynamic therapy principally in the wavelength range in which an absorption peak of a photosensitizer introduced into the body lies."

Alfano discloses a device 11 with a transport capsule 13, a light source 23, an imaging system 25 and a power system 27. Alfano discloses that the power system can be an internal battery and/or an external power source. (col. 5 l. 25-27). Alfano states that "due to the finite size of the device, the major power requirement for motion, communications and laser operation is typically delivered by external pumped power sources." (col. 5 l. 48-51). One such power source includes "a modified induction motor-based electric generator can be disposed inside the device, with an external time-

varied powered magnetic field used to rotate a rotor inside the device, the rotated rotor then being used to generate electric current.” (col. 5 l. 52-57). Alfano also discloses that the light source is preferably LEDs, lasers or a photographic flash lamp. (col. 6 l. 47-49). The “laser system or a flash lamp may be used either as an illumination source or as a surgical source to ablate tissue or to weld tissues together.” (col. 6 l. 50-53). Figs. 2-5, 7a, 7b and 11b all depict a camera and lens extending out of capsule 13.

Applicant respectfully submits that amended claim 1 is patentable over Alfano because claim 1 requires “a position-detecting element whose position can be determined from outside the body and which is capable to detect at least one of a position and an orientation of said probe with respect to axes of said probe relative to said body cavity.” The Examiner states that Alfano teaches “the use of an electromagnetic coil and an ultrasound delivery system.” However, Alfano only discloses the use of such elements so as to provide power to the device. In fact Alfano is completely silent with respect to detecting the position of the device, let alone from outside the body, and is completely silent about determining the orientation of the device relative to the body cavity. As a result, Alfano does not disclose “a position-detecting element whose position can be determined from outside the body and which is capable to detect at least one of a position and an orientation of said probe with respect to axes of said probe relative to said body cavity.”

Applicant respectfully submits that new claim 31 is patentable over Alfano because new claim 31 requires a capsule that “contains at least one luminescent substance which can be excited by excitation from outside the body and emits light through a capsule wall.” As noted above, Alfano only discloses that light is emitted via LEDs, lasers, or a flash lamp. With respect to original claims 19-21, the Examiner states that “inherent in the use of a surgical system 17 within the capsule 13 is the use of a luminescent marker or substance or a reservoir of therapeutic substance.” However, to “establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established

by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circum-stances is not sufficient.’ ” In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Alfano does not provide any indication that there is any other source for emitting light or that another source would be beneficial. As a result, Alfano does not disclose, inherently or otherwise, “at least one luminescent substance which can be excited by excitation from outside the body.” Further, since Alfano discloses transmitting light through a lens disposed outside the device. Alfano does not disclose, nor does it fairly suggest, the emission of “light through a capsule wall.” As a result, Alfano does not anticipate new claim 31.

Applicant respectfully submits that new claim 32 is patentable over Alfano because new claim 32 requires that the “probe has a fully enclosing transparent capsule wall.” As noted above, Alfano discloses that the light source and the camera extend out through the capsule wall. Alfano also suggests that the capsule wall is not transparent by the fact that the light source and the camera all extend through capsule. A non-transparent capsule wall would require the light source and camera to extend through the wall in order for light to be emitted and for images to be gathered. As a result, Alfano does not disclose “a fully enclosing transparent capsule wall.”

Applicant respectfully submits that new claim 33 is patentable over Alfano because new claim 33 requires that the capsule “contains at least one element emitting therapeutic light, said element emitting light for photodynamic therapy principally in the wavelength range in which an absorption peak of a photosensitizer introduced into the body lies.” Photodynamic therapy involves the injection of a drug that contains a photosensitizing agent and is absorbed by a certain type of cell, such as cancer cells. The exposure of these cells that have absorbed the drug causes the cells to be destroyed upon exposure to light. The Examiner states that Alfano teaches a “laser system as a surgical source to ablate tissue or weld tissues together.” However, Alfano does not make any reference to photodynamic therapy or the exposure of cells that have absorbed a photosensitizer to a particular light source. As a result, Alfano does not disclose a capsule that “contains at least one element emitting therapeutic light, said ele-

ment emitting light for photodynamic therapy principally in the wavelength range in which an absorption peak of a photosensitizer introduced into the body lies.”

Applicant also submits that one skilled in the art would not be motivated to modify Alfano in accordance with claims 1, 31, 32, 33 and 34. In order for the claimed invention to be obvious over the prior art, there must be some suggestion or motivation in the cited references to modify or combine the references in accordance with the claimed invention. See, e.g., *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990).

Applicant submits that one skilled in the art would not be motivated to modify Alfano in accordance with claim 1. As noted before, Alfano is completely silent with respect to tracking the position of the device relative to the body cavity. Since Alfano does not provide any indication that it would be beneficial to track the relative position of the device to the body cavity, one skilled in the art would not be motivated to modify the device such that the “capsule contains a position-detecting element whose position can be determined from outside the body.” Even if it could be argued that one skilled in the art may be motivated to incorporate a position-detecting element, that does not mean that the one skilled would be motivated to further modify the position-detecting element such that it “is capable to detect at least one of a position and an orientation of said probe with respect to axes of said probe relative to said body cavity.” Since Alfano is completely silent with respect to position and orientation of the device relative to the body cavity, Applicant submits that one skilled in the art would not be motivated to modify Alfano to incorporate such an element.

Applicant submits that one skilled in the art would not be motivated to modify Alfano in accordance with claim 31. As noted above, Alfano does not inherently disclose “at least one luminescent substance which can be excited by excitation from outside the body.” Since Alfano only discloses the transmission of light from a single source and that source being an LED, laser or flash lamp, and does not provide any indication that it would be beneficial to incorporate another source of light, one skilled in the art would not be motivated to modify Alfano to incorporate “at least one luminescent substance

which can be excited by excitation from outside the body.” Further, if one skilled in the art determined that another light source was necessary, any modification would like include another LED, laser or flash lamp, because these are the only light sources disclosed by Alfano. Still further, all embodiments in Alfano illustrate a lens that is disposed outside of the device. By disposing the lens outside of the device, Alfano teaches away the transmission of light “through a capsule wall.” Since Alfano only discloses the emission of light through LEDs, lasers or flash lamps and only discloses the transmission of light through a lens that protrudes outside the device, Alfano provides no suggestion or motivation to modify the device such that it “contains at least one luminescent substance which can be excited by excitation from outside the body and emits light through a capsule wall.” As a result, Alfano does not render claim 31 obvious.

Applicant submits that one skilled in the art would not be motivated to modify Alfano in accordance with claim 32. As noted, all embodiments in Alfano illustrate a lens that is disposed outside of the device. Since Alfano discloses that the light transmission and camera lenses are disposed outside of the device, this inherently indicates that the capsule wall in Alfano is not transparent. Since all embodiments in Alfano disclose disposing the light transmission lens and the camera lens outside of the capsule wall, Alfano teaches away a device that “has a fully enclosing transparent capsule wall.” Based on the foregoing, Applicant submits that Alfano does not render claim 31 obvious.

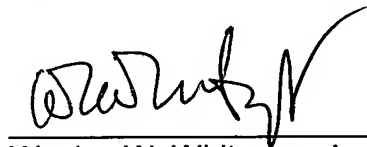
Applicant submits that one skilled in the art would not be motivated to modify Alfano in accordance with claim 33. As noted, Alfano only discloses the use of a laser or a flash lamp as an illumination source or a surgical source to ablate tissue or to weld tissues together. With respect to treating cancer cells, Alfano only indicates that a laser could be used to remove those cells. Alfano is completely silent with respect to the use of therapeutic light for photodynamic therapy or the incorporation of a photosensitizer. Without any indication that such a device could incorporate therapeutic light, one skilled in the art would not be motivated to modify Alfano such that it comprised “at least one element emitting therapeutic light, said element emitting light for photodynamic therapy

principally in the wavelength range in which an absorption peak of a photosensitizer introduced into the body lies." As a result, Applicant submits that Alfano does not render claim 33 obvious.

In view of the foregoing amendments and remarks, it is respectfully submitted that all of the claims currently pending in the application are in condition for allowance. Reconsideration and notice to that effect is earnestly requested.

Respectfully submitted,

July 18, 2006



Wesley W. Whitmyer, Jr., Registration No. 33,558
Christopher H. Strate, Registration No. 57,376
Attorneys for Applicant
ST.ONGE STEWARD JOHNSTON & REENS LLC
986 Bedford Street
Stamford, CT 06905-5619
203 324-6155